

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed August 26, 2009 (the "*Office Action*"). At the time of the *Office Action*, Claims 1-7, 9-15, 17-23, 25-31, and 33 were pending in the Application and stand rejected. In order to advance prosecution Applicants have amended Claims 1, 9, 17, 25, and 33; added new Claims 36-38; and cancelled Claims 3, 11, 19, and 27. No new matter has been added. For at least the reasons provided below, Applicants respectfully traverse the rejections and request reconsideration and favorable action in this case.

Applicants' Summary of the Telephone Conference:

Applicants appreciate the Examiner's participation in the telephone conference conducted on October 27, 2009 among Examiner Quan-Zhen Wang and Applicants' representatives Chad Walters (Reg. No. 48,022) and Timothy Gerlach (Reg. No. 57,548). During the telephone conference, the § 103 rejections were discussed. No agreement was reached with respect to the § 103 rejections. Also during the telephone conference, the § 112 rejection of Claim 34 was discussed. The Examiner agreed to withdraw the § 112 rejection of Claim 34. This is accurately reflected in the Interview Summary provided by the Examiner on November 3, 2009.

Section 112 Rejections

The *Office Action* rejects Claims 1-7, 9-15, 17-23, 25-31, and 33-35 under 35 U.S.C. § 112, second paragraph. In particular, the *Office Action* contends that "it is unclear what is considered as the 'IP link.'" *Office Action*, page 2. The M.P.E.P. states that the question under § 112 is "whether the claim apprises one of ordinary skill in the art of its scope" and that "[t]he essential inquiry . . . is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed . . . in light of: (A) The content of the particular application disclosure." M.P.E.P. § 2173.2. Claims 1-7, 9-15, 17-23, 25-31, and 33-35 comply with 35 U.S.C. § 112, second paragraph. By way of example, and not by limitation, at least in FIGURE 1 and on page 7, lines 2-18 of the originally filed specification there is a discussion of IP network 12 and IP links 18, as well as optical network 14 and optical links 22. From this, as well as the remainder of the specification, one skilled in the art would be apprised of

the scope of the claims, including the term "IP link." Accordingly, Applicants respectfully request that this § 112 rejection be withdrawn.

The *Office Action* also rejects Claim 34 under 35 U.S.C. § 112, second paragraph. During the telephone conference conducted on October 27, 2009 the Examiner agreed to withdraw this rejection.

Section 103 Rejection

The *Office Action* rejects Claims 1-2, 4-7, 9-10, 12-15, 17-18, 20-23, 25-26, 28-31, and 34-35 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0117678 filed by Chang et al. ("*Chang*") in view of U.S. Patent Application Publication No. 2006/0209785 filed by Iovanna et al. ("*Iovanna*"); the *Office Action* rejects Claims 3, 11, 19, 27, and 33 as being unpatentable over *Chang* in view of *Iovanna* and U.S. Patent No. 6,882,627 issued to Piedad et al. ("*Pieda*"). Applicants respectfully traverse these rejections at least for the reasons discussed below.

Claim 1 recites computing, based on a transformed topology, a hybrid path route for a selected LSP that includes at least one IP link already activated in the IP layer and at least one lightpath of the WDM topology coupled to the IP network but not activated in the IP layer and activating a new IP link on each of the at least one lightpaths, wherein the new IP link is added to the IP links available for the routing of LSPs. This is not disclosed, taught or suggested by *Chang* or *Iovanna*, either alone or in combination. In particular, to the extent *Chang* and *Iovanna* disclose routing, neither discloses, teaches, or suggests computing, based on a transformed topology, a hybrid path route that comprises an IP link already activated in an IP network operated by an IP service provider and a lightpath operated by an optical service provider that is not activated in the IP layer. Nor do they disclose that a new IP link is activated to add it to the IP links available for routing LSPs

As can be seen from its title, the disclosure of *Chang* is based on multicasting traffic in the optical layer. There is nothing in *Chang* that suggests that any of the disclosed routing includes a hybrid path route comprising at least one IP link already activated in the IP layer and at least one lightpath of the WDM topology coupled to the IP network but not activated in the IP layer. More specifically, *Chang* discloses receiving a packet from an IP router, converting it into a suitable optical form, and then routing it through all optical components

until it leaves the optical network. *See e.g., Chang*, FIGS. 17-19, 28, 29, 31, and 36; and paragraphs [0155]-[0156], [0196], [0197], [0212] and [0224]. *Chang* provides no indication that any of the hops along the route through the optical network are different than the others. That is, there is nothing in *Chang* that suggests that the route includes both IP links already activated in the IP layer and lightpaths that are not activated in the IP layer; nor is there is anything in *Chang* that suggests that a portion of the route is already part of an IP network, operated by an IP service provider, and that a portion of the route is based on a transformed topology of lightpaths, provided by an optical transport service provider, that are not activated in the IP layer.

Iovanna discloses a method "for routing data packets across a multi-layer network which includes a plurality of nodes, a logical level provided with a plurality of logical links and a physical level provided with a plurality of physical links, each of the logical links corresponding to at least one of the physical links." *Iovanna*, Abstract. There is no indication that the routing of *Iovanna* includes computing a hybrid path route in which lightpaths of a transformed topology operated by an optical service provider are added to the IP links operated by an IP service provider. In fact, *Iovanna* discloses that "each link in the network is assigned a weight, and the network control program is now able to compute an optimal path at the logical level or a Label Switched Path." *Iovanna*, paragraph [0076]. Thus, to the extent *Iovanna* assigns a weight to a link, the link has to be part of the network prior to the route being determined; and thus it is not activated and added to the available links after a hybrid path route is computed.

The proposed combination, even when modified with *Pieda*, fails to disclose receiving a transformed topology constructed by an optical transport service provider of a wavelength division multiplex (WDM) topology, the transformed topology comprising a subset of lightpaths of the WDM topology that are available for, but not currently activated in, the IP layer.

In rejecting a similar element recited in the now cancelled Claim 3, the *Office Action* contends that *Chang* and *Iovanna* inherently comprise a subset of available lightpaths and that *Pieda* discloses a transformed topology. *Office Action*, page 6. However, with respect to inherency, the M.P.E.P. states that:

To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient."

M.P.E.P. § 2112 (quoting *In re Robertson*, 49 U.S.P.Q.2d 1949, 1150-51 (Fed. Cir. 1999)). The disclosures of *Chang* and *Iovanna* both suggest that all the lightpaths are known when routes are calculated. *Chang* discloses that the "NC&M 220 periodically requests and receives information about: . . . (c) the ports which are served by the wavelengths." *Chang*, paragraph [0118]. *Iovanna* discloses a network control program that is responsible for routing "must be able to access information regarding both the MPLS layer and the optical layer." *Iovanna*, paragraph [0064]. Thus, neither *Chang* nor *Iovanna* must necessarily disclose using a subset of lightpaths as suggested by the *Office Action*.

Furthermore, the transformation disclosed by *Pieda* is not a reduction. *Pieda* discloses that the "transformation preferably involves transforming the link requiring transformation into a forward unidirectional link and a reverse unidirectional link each having a respective cost." *Pieda*, column 2, lines 45-49. There is nothing in *Pieda* which discloses, teaches or suggests that the transformed topology is a subset of available lightpaths of the WDM topology. If anything, the transformation disclosed by *Pieda* creates additional links.

Accordingly, for at least these reasons, Applicants respectfully submit Claim 1 is allowable, as are all claims depending therefrom. For at least certain analogous reasons, Applicants respectfully submit that Claims 9, 17, 25 and 33 are allowable, as are all claims depending therefrom.

New Claims

Claims 36-38 depend from Claim 1. Accordingly, for at least the reasons provided above with respect to Claim 1, Claims 36-38 are allowable.

In addition to being allowable as depending from Claim 1, Claim 36 is also allowable because the proposed combination fails to disclose that a transformed topology shields at least one detail of the actual WDM topology. Both *Chang* and *Iovanna* rely on being aware of the actual topology in determining routes. See e.g., *Chang*, paragraph [0118] ("NC&M 220 periodically requests and receives information about: . . . (c) the ports which are served

by the wavelengths"); and *Iovanna*, paragraph [0064] (A network control program responsible for routing "must be able to access information regarding both the MPLS layer and the optical layer."). Accordingly, for at least these reasons, Applicants respectfully submit Claim 36 is allowable.

In addition to being allowable as depending from Claim 1, Claim 37 is also allowable because the proposed combination fails to disclose that the cost is a monetary cost. There is no mention of monetary costs in either *Chang* or *Iovanna*. Accordingly, for at least these reasons, Applicants respectfully submit Claim 37 is allowable.

In addition to being allowable as depending from Claim 1, Claim 38 is also allowable because the proposed combination fails to disclose computing an alternate path route for the selected LSP and, upon determining that the performance of the alternate path route for the selected LSP does not reduce costs, computing the hybrid path route for the selected LSP. In addition to failing to disclose a hybrid path route as discussed above with respect to Claim 1, there is no indication in either *Chang* or *Iovanna* that an alternate path is computed first, and if that fails to reduce costs, then a hybrid path is computed. Accordingly, for at least these reasons, Applicants respectfully submit Claim 38 is allowable.

No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the references cited by the *Office Action*. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a future Response or on Appeal, if appropriate. By not responding to additional statements made by the *Office Action*, Applicants do not acquiesce to the *Office Action's* additional statements. The example distinctions discussed by Applicants are sufficient to overcome the *Office Action's* rejections.


CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

If the Examiner believes a telephone conference would advance prosecution of this case in any way, the Examiner is invited to contact Chad C. Walters, the Attorney for Applicants, at the Examiner's convenience at (214) 953-6511.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any fee due or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,
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